

RIVERS AND FLOODS

[River and Flood Division, MERRILL BERNARD in Charge]

The report for April 1939 will be included in the May issue of the REVIEW.—*Editor.*

WEATHER ON THE ATLANTIC AND PACIFIC OCEANS

[The Marine Division, W. E. HURD, acting in charge]

NORTH ATLANTIC OCEAN, APRIL 1939

By H. C. HUNTER

Atmospheric pressure.—The monthly means of pressure nowhere showed any extraordinary departure from normal. The eastern and southwestern regions had somewhat higher values than normal, but the central and northwestern had lower than normal. The greatest departure was to be found near Newfoundland, Labrador, and southern Greenland, the station at Belle Isle, Newfoundland, averaging 0.11 inch deficient. Both the Azores high area and the Icelandic low were displaced to westward of their usual April positions.

There were considerable fluctuations of pressure during the month. The northwestern and north-central portions experienced quite low pressure about the 10th to 18th, but in contrast the region from Bermuda to the Azores had high pressure from the 12th to 18th. Around the British Isles low pressure during the first 8 days was followed by somewhat irregular conditions, but with rather high pressure prevailing about the 18th and again during the final 5 days of the month.

The extremes of pressure in the vessel reports at hand were 30.66 and 28.47 inches, both noted near the British Isles. The high mark was reached within a few miles of the southwest coast of Ireland, about noon of the 19th, the vessel being the British steamship *Montreal City*. An unidentified vessel radioed the report of the lowest reading from near 52° N., 22° W., late on the forenoon of the 3d.

TABLE 1.—Averages, departures, and extremes of atmospheric pressure (sea level) at selected stations for the North Atlantic Ocean and its shores, April 1939

Station	Average pressure	Departure	High-est	Date	Lowest	Date
	Inches	Inch	Inches		Inches	
Julianehaab, Greenland	29.73	-0.10	30.10	4	29.10	14
Reykjavik, Iceland	29.82	+0.02	30.36	30	29.21	15
Lerwick, Shetland Islands	29.83	+0.03	30.53	29	29.09	15
Valencia, Ireland	29.92	+0.03	30.62	19	28.91	4
Lisbon, Portugal	30.04	+0.05	30.39	15	29.59	5
Madeira	30.02	+0.01	30.24	14	29.80	4
Horta, Azores	30.08	-0.07	30.46	14	29.78	3, 4
Belle Isle, Newfoundland	29.78	-0.11	30.40	22	29.08	16
Halifax, Nova Scotia	29.92	-0.01	30.40	18	29.46	30
Nantucket	29.93	-0.04	30.50	17	29.33	2
Hatteras	30.00	-0.01	30.47	14	29.60	29
Bermuda	30.14	+0.05	30.36	15	29.64	29
Turks Island	30.05	+0.03	30.14	14	29.89	4
Key West	30.02	0.00	30.23	14	29.86	29
New Orleans	30.02	+0.02	30.41	13	29.72	6

¹ For 25 days.

NOTE.—All data based on a. m. observations only, with departures compiled from best available normals related to time of observation, except Hatteras, Key West, Nantucket, and New Orleans, which are 24-hour corrected means.

Cyclones and gales.—All sections considered, there was about the usual storm activity for April over the North Atlantic. The first 5 days included numerous gale reports from the eastern part of the chief steamship lanes to northwestern Europe, but that region was nearly free from vigorous storms during the remainder of the month. The central and western portions of the North Atlantic were

most affected by strong lows about the 7th to 11th and during the final 5 days.

When April began, two storm centers were between the southern Grand Banks and the British Isles, near the fifteenth and fortieth meridians, respectively. By the evening of the 2d these had coalesced near 53° N., 22° W., and a very intense low was the result. For more than a day there was no marked change, but high pressure prevailed at the time over Greenland and the low presently moved a moderate distance toward the east-southeast with some loss of strength, then it lengthened toward the northeast and separated into two cyclones, each much weaker than the single storm had been; so by the evening of the 6th scarcely any strong winds remained in the region. The German liner *Columbus* had reported force 11 in connection with this cyclonic system, and another vessel noted force 10.

The next instance of force-11 wind likewise was from the *Columbus*, the day being the 7th and the location near 41° N., 63° W., and about the same time the American steamship *Exiria* noted force 10 when about 300 miles to southward of this position. At the time a cyclone was centered to northwestward of the Gulf of St. Lawrence, with a narrow extension toward the southeast and south; but this center quickly ceased to affect the much traveled sections of the ocean.

Soon afterward much of the western Atlantic was under the influence of another low, which was off the Carolina coast on the 8th, not yet well developed, but on the 9th was a short distance south of Nova Scotia and comparatively strong. Continued advance toward the northeast had brought the center by the 11th and the forenoon of the 12th to about 52° N., 32° W., with great intensity. The lone report of hurricane wind from the North Atlantic this month was connected with this low, the vessel being the Norwegian motor tanker *Britannia*.

During the latter part of the 12th and all of the 13th the center moved northeastward, losing force. On the whole, the period from the 13th to 22d was a quiet one for April over the Atlantic. In the western Gulf of Mexico, however, there was a brief encounter with intense winds on the 16th, when the American tanker *Eastern Sun* noted strong-gale force; there was at this time a cyclonic system of marked extent from central Canada southward to the western Gulf, and the vessel met the high winds in the southern part of the storm area.

About the 27th, by the uniting of moderately strong cyclones near mid-Atlantic, a strong low formed and was felt over a large area on that day and the next, the *American Merchant* meeting storm-force winds. As this low weakened, other centers, advancing from the North American Continent, caused gales over the portion west of the fifty-fifth meridian, though no force greater than 10 there has yet been reported. This group of low centers was still quite strong when the month ended.

Fog.—There was decided contrast in the parts of the month when fog was met most frequently over different North Atlantic areas. In the general vicinity of the